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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Harald Mees et al.

Serial No.: 10/522,682 ✓

Filed: January 31, 2005

For: FILTER ELEMENT AND METHOD  
FOR THE PRODUCTION THEREOF

PATENT

Art Unit: 1723

Examiner:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

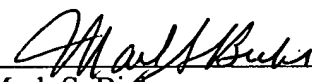
**SUBMISSION OF ENGLISH LANGUAGE  
PRELIMINARY EXAMINATION REPORT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith is an English language Preliminary Examination Report for the  
above-identified application.

Respectfully submitted,

  
Mark S. Bicks  
Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, L.L.P.  
1300 19th Street, N.W., Suite 600  
Washington, D.C. 20036  
(202) 659-9076  
Dated: Dec. 2, 2005

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 72.2)

To:

**BARTELS UND PARTNER  
PATENTANWÄLTE**

BARTELS UND PARTNER  
Lange Strasse 51  
70174 Stuttgart  
ALLEMAGNE

Eingegangen: 22. MRZ. 2005  
Received:

TERMIN .....

|  |   |
|--|---|
| Date of mailing (day/month/year)<br>17 March 2005 (17.03.2005) |   |
| Applicant's or agent's file reference<br>40cdh/229086          | IMPORTANT NOTIFICATION  |
| International application No.<br>PCT/EP2003/008271             | International filing date (day/month/year)<br>26 July 2003 (26.07.2003) |
| Applicant<br>HYDAC FILTERTECHNIK GMBH et al                    |   |

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

CN

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP, JP, US

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

Facsimile No.+41 22 740 14 35

Facsimile No.+41 22 338 70 80

Translation

PATENT COOPERATION TREATY

PCT/EP2003/008271



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

|   |   |   |
|---|---|---|
| Applicant's or agent's file reference<br>40cdh/229086   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |   |
| International application No.<br>PCT/EP2003/008271  | International filing date (day/month/year)<br>26 July 2003 (26.07.2003)   | Priority date (day/month/year)<br>02 August 2002 (02.08.2002) |
| International Patent Classification (IPC) or national classification and IPC<br>B01D 29/23, 46/52 |   |   |
| Applicant<br>HYDAC FILTERTECHNIK GMBH   |   |   |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

|  |  |
|--|--|
| Date of submission of the demand<br>31 October 2003 (31.10.2003) | Date of completion of this report<br>22 November 2004 (22.11.2004) |
| Name and mailing address of the IPEA/EP                          | Authorized officer   |
| Facsimile No.  | Telephone No.  |

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/008271

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-10 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_ 1-10 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
pages \_\_\_\_\_ 1/4-4/4 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/08271

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

|                               |        |      |     |
|-------------------------------|--------|------|-----|
| Novelty (N)                   | Claims | 2-10 | YES |
|                               | Claims | 1    | NO  |
| Inventive step (IS)           | Claims | 6-10 | YES |
|                               | Claims | 1-5  | NO  |
| Industrial applicability (IA) | Claims | 1-10 | YES |
|                               | Claims |      | NO  |

**2. Citations and explanations**

Reference is made to the following documents:

D1: US-A-5 622 624 (LAUER VIKTOR ET AL.) 22 April  
1997 (1997-04-22)

D2: US-A-4 735 720 (KERSTING DARREL) 5 April 1988  
(1988-04-05)

**1. CLARITY**

The application does not satisfy the requirements of PCT Article 6 because claims 1 and 5 are not clear.

**1.1 Claim 1**

The wording "an arrangement that acts at the seam (5) to prevent bulging of the folds (9) caused by the action of the fluid flow in the area of the seam (5)", in the characterising part of claim 1, does not meet the requirements of PCT Article 6 because the subject matter for which protection is sought is not clearly defined.

The claim attempts to define the subject matter in terms of the result to be achieved, but in so doing merely states the problem to be solved. To overcome this defect,

the technical features necessary for achieving this result would have to be included in the claim.

## 1.2 Claim 5

Like claim 1, by the wording "is dimensioned so that the annular body (1) ... can be turned inside out" claim 5 attempts to define the subject matter in terms of the result to be achieved, but in so doing merely states the problem to be solved. To overcome this defect, the technical features necessary for achieving this result would have to be included in the claim.

Claim 5 does not therefore meet the requirements of PCT Article 6 because the subject matter for which protection is sought is not clearly defined.

## 2. NOVELTY (PCT ARTICLE 33(2))

As far as the present application can be understood, it does not satisfy the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel (PCT Article 33(2)).

D1 (fig. 1 to 3) discloses a filter element having the following features:

- folded filter mat web having an exterior cylindrical supporting tube;
- the seam of the end borders of the filter mat web is designed in such a way that no deformation of the seam occurs.

The subject matter of claim 1 is therefore not novel (PCT Article 33(2)).

### 3. INVENTIVE STEP (PCT ARTICLE 33(3))

As far as the present application can be understood, it does not satisfy the requirements of PCT Article 33(1) because the subject matter of claims 1 to 5 does not involve an inventive step (PCT Article 33(3)).

#### 3.1 Claim 1

D2, which is considered to be the closest prior art, discloses (cf. column 2, lines 37 to 49; fig. 1, 3) a filter element from which the subject matter of claim 1 differs in that the filter element is provided with an exterior fluid-permeable supporting tube (15).

The problem addressed by the present invention can therefore be considered that of providing a filter element that does not undergo deformation whenever fluid flows through it from inside to outside.

The solution proposed in claim 1 of the present application cannot be regarded as inventive (PCT Article 33(3)) for the following reasons:

The feature "to provide a filter element with an exterior fluid-permeable supporting tube" is a matter of common practice in the art for filters through which fluid flows from inside to outside, the purpose being to absorb the internal pressure of the fluid and thereby to avoid deformation of the filter mat web. For a person skilled in the art the inclusion of this feature in the filter element described in D2 would be an obvious routine technical approach to solving the problem of interest.

### 3.2 Claims 2, 3, 4, 5

Dependent claims 2, 3, 4 and 5 do not appear to contain any additional features which in combination with the features of any claim to which claims 2, 3, 4 and 5 refer back could yield a subject matter involving an inventive step. The reasons are as follows:

#### 3.2.1 Claim 2

The feature of claim 2 that "the end borders that are joined together face the inside of the annular body to be formed" is already known from D2.

#### 3.2.2 Claims 3, 4, 5

The features of claims 3, 4 and 5 are already known from D2.

### 4. DEPENDENT CLAIMS 6 TO 9

A person skilled in the art would not consider the inclusion of the features of dependent claims 6 to 9 to be a routine approach to solving the problem of interest.

The subject matter of dependent claims 6 to 9 therefore involves an inventive step (PCT Article 33(3)).

### 5. CLAIM 10

The subject matter of claim 10 differs from the closest prior art D1 in that there is formed a filter cylinder whose exterior face abuts a fluid-permeable supporting



tube, in that a flexible filter mat web having a series of at least sectionally mutually abutting folds is joined at its end borders to form an annular body and is bonded along a seam disposed on the outside of the annular body, and the annular body formed is turned inside out so that the seam is on the inside thereof.

The problem addressed by the present invention can therefore be considered that of providing a filter where the method of production is simplified and the annular body forming the filter cylinder has protection against bulging.

The solution to this problem as proposed in claim 10 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

There is nothing in D1 to suggest solving the defined problem with the distinguishing features, and the solution of claim 10 cannot be regarded as obvious.

The subject matter of claim 10 is therefore novel and involves an inventive step (PCT Article 33(3)).